

lusca, Dr. Bryant Walker. The reference of these lake shells to another species removes an apparent anomaly in the distribution of the west coast forms to which they have been referred and brings them more in accord with our present knowledge concerning the ecological distribution of species in lakes and rivers.

MOLLUSCS FROM THE MANITOBA--ONTARIO BOUNDARY

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The species noted below were collected during the years 1923-25 in the vicinity of the boundary between the southern portions of the provinces of Manitoba and Ontario, Canada. This district is near the western border of the Canadian Zone in southern Manitoba, and outcrops of Pre-Cambrian rocks form the most striking geological feature. The area is treed principally by conifers. Due to irregularities of relief thousands of small lakes have formed. As has been pointed out by Bensley (2) many of the lakes of this Archean area have a high content of organic detritus, and often have their waters discolored by vegetable extracts till they resemble weak tea. The area in which the collecting was done lies wholly within the Hudson Bay drainage system. The Winnipeg River with its connecting waters, including the English River, the Lake of the Woods, and Shoal Lake, forms, when its fauna is considered, a distinct section of the Nelson River portion of this northern drainage. Very few molluscs have been collected in this district, the only previous records being those of Binney (3 & 4), Dall (5), Hanham (6) and Mozley (8). The records of Adamstone (1), Robertson (10), and Whiteaves (12-15) while from closely similar habitats do not relate to the same drainage system. This list includes thirty-three species of which only four have been previously recorded from this area. In addition there are three species the precise identity of which has not been ascertained, but which are distinct from the others mentioned. A collection

was made in a backwater of the Winnipeg River a short distance west of Minaki station, this is referred to simply as Minaki, Winnipeg River. The list of references is believed to contain all the papers pertaining to this district which have appeared since Dall's volume was published. Drs. Victor Sterki, Bryant Walker, and F. C. Baker very kindly identified many of the species and confirmed certain others. I am also indebted to Dr. C. H. O'Donoghue, and Messrs. L. B. Ciark and A. B. Gresham for collecting certain shells.

PELECYPODA.

Family UNIONIDAE.

Lasmigona complanata Barnes.

ONTARIO: Minaki, Winnipeg River. Rare. The shells collected were small, dark-colored, and much eroded. Typical measurements are: Length, 81 mm.; height, 60 mm.; depth, 24.5 mm.; thickness, 1 mm. (maximum at periphery and center). It is of interest to note the extreme thinness of the shell in this Pre-Cambrian country where there is little available lime. Ortmann (9, p. 136) states that this species occurs in the "Lake of the Woods, belonging to the upper lakes drainage." The Lake of the Woods is in the Hudson Bay drainage.

Anodonta grandis footiana Lea.

ONT.: Minaki, Winnipeg River; Otter Lake, near Cygnet Rapids a few miles east of Malachi.

Strophitus edentulus Say.

MANITOBA: Whitemouth River, near its junction with the Winnipeg River.

Lampsilis superiorensis Marsh.¹

ONT.: Minaki, Winnipeg River; Pistol Lake, near Minaki; Fox Lake, near Wade. This species is abundant at Minaki.

¹Dall (5, p. 125) records this species from "Hill River, Keewatin." I have been unable to locate this river, although there is a Hill or Hilly Lake with a river flowing from it, south-west of Jackpine, Ont. (C. P. R. main line), which was in the old District of Keewatin.

Typical measurements from this habitat are: Length, 68 mm.; height, 42 mm.; depth, 27 mm.; thickness (at center), 1.1 mm. Length, 72 mm.; height, 41 mm.; depth, 29.5 mm.; thickness (at center), 1.5 mm. Length, 68 mm.; height, 41 mm.; depth, 26.5 mm.; thickness (at center), 1 mm.

Family SPHAERIIDAE.

Sphaerium sulcatum Lam.

MAN.: Indian Bay Station (Waugh), Falcon Bay (Shoal Lake).

ONT.: Rainy Lake, one mile east of Wade. This lake should not be confused with the Rainy Lake on the International Boundary.

Sphaerium crassum Sterki.

MAN.: Indian Bay Station, Falcon Bay.

ONT.: Minaki, Winnipeg River. Some of the specimens from Falcon Bay had the hinges reversed. This species has not been previously reported from Manitoba. Adamstone (1.) found it in Lake Nipigon, Ont., in the Great Lakes drainage.

Sphaerium solidulum Prime.

MAN.: Whitemouth River, near its junction with the Winnipeg River.

Sphaerium striatinum Lam.

MAN.: Whitemouth River, near its junction with the Winnipeg River. Sterki (11, p. 435) apparently thinks the previous Manitoba records for this species are not sufficiently authenticated to consider.

Sphaerium occidentale Prime.

MAN.: Mile 69, G. W. W. D. Ry., near the settlement known as Birch River. Shallow railway ditch.

Sphaerium truncatum Lindsay.

ONT.: Skunk Lake, one mile west of Minaki. This species has not been previously reported from this part of the country.

Musculium securis Prime.

ONT.: Alice Lake, between Minaki and Wade.

Pisidium tenuissimum Sterki.

ONT.: Skunk Lake, near Minaki. This species has not been previously reported from the Hudson Bay drainage.

GASTROPODA.

Family PUPILLIDAE.

Acanthinula harpa Say.

ONT. Poplar-Birch-Jack Pine habitat, $1\frac{1}{2}$ miles east of Malachi; Otter Lake, near Cygnet Rapids, between Malachi and Wade, pure stand of young birch.

Strobilops affinis Pils.

ONT.: $1\frac{1}{2}$ miles east of Malachi, as above; near Cygnet Rapids, as above.

Family ZONITIDAE.

Euconulus chersinus polygyratus Pils.

ONT.: $1\frac{1}{2}$ miles east of Malachi, as above. This species has not been previously recorded from Western Canada.

Zonitoides exigua Stimpson.

ONT.: $1\frac{1}{2}$ miles east of Malachi, as above; near Cygnet Rapids, as above. This species has not been previously reported from Western Canada.

Zonitoides arborea Say.

ONT.: $1\frac{1}{2}$ miles east of Malachi, as above.

Polita hammonis Strom.

ONT.: $1\frac{1}{2}$ miles east of Malachi, as above; near Cygnet Rapids, as above.

Family ENDODONTIDAE.

Pyramidula cronkhitei anthonyi Pils.

ONT.: $1\frac{1}{2}$ miles east of Malachi, as above.

Family SUCCINEIDAE.

Succinea ovalis Say.

MAN.: Mile 76½, G. W. W. D. Ry., near the settlement known as East Braintree.

ONT.: Near Cygnet Rapids, as above.

Succinea sp.

ONT.: Near Cygnet Rapids, as above.

Family LYMNAEIDAE.

Lymnaea stagnalis appressa Say.

ONT.: Minaki, Winnipeg River.

Lymnaea stagnalis sanctæmarix Walker.

MAN.: Lake Brereton. This variety has not been previously reported from the Hudson Bay drainage.

Lymnaea emarginata canadensis Sow.

ONT.: Minaki, Winnipeg River,

Lymnaea emarginata angulata Sow.

MAN.: Winnipeg River, near its junction with the White-mouth River. This variety is new to Manitoba.

Lymnaea vahlii Moll.?

MAN.: Mile 69, G. W. W. D. Ry., shallow railway ditch.

Lymnaea obrussa exigua Lea.

MAN.: Mile 69, G. W. W. D. Ry., as above.

Lymnaea apicina Lea ?

ONT.: English River, not far from its junction with the Winnipeg River; Lost Lake, near Minaki.

Lymnaea megasoma Say.

MAN.: Indian Bay Station, Falcon Bay.

Family PLANORBIDAE.

Planorbis corpulentus Say.

ONT.: Minaki, Winnipeg River; Sand Lake (Winnipeg River); White Dog, Winnipeg River; Sword Lake, near Minaki; Fox Lake, near Wade. Binney (4, p. 114) states that this species is found in the "Winnipeck River," possibly meaning the Winnipeg River.

Planorbis trivolvis Say.

MAN.: Indian Bay Station, Falcon Bay.

Planorbis campanulatus var.

MAN.: Indian Bay Station, Falcon Bay.

ONT.: Minaka, Winnipeg River; White Dog, Winnipeg River; Star Lake, near Reddit; Alice and Onion Lakes, near Minaki; English River, near its junction with the Winnipeg River. These shells belong to a new variety, shortly to be described by Miss M. L. Winslow of the Museum of Zoology University of Michigan.

Planorbis exacuus Say.

ONT.: Minaki, Winnipeg River. The single shell upon which this record is based does not appear to belong to the variety *megas* Dall.

Planorbis parvus Say.

ONT.: Minaki, Winnipeg River; Alice and Lost Lakes, near Minaki; Malachi Lake, Malachi.

Family PHYSIDAE.

Physa integra Hald.

MAN.: Mile 77, G. W. W. D. Ry., just below a small rapids on the Birch River.

ONT.: Lost and Sword Lakes, near Minaki; Star Lake, near Reddit.

Physa gyrina Say.

ONT.: Minaki, Winnipeg River; Sand and Onion Lakes, near

Minaki; English River, forty miles north of Minaki; Fox Lake, near Wade; Otter Lake, near Malachi.

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**A LIST OF THE MOLLUSKS COLLECTED BY MR. OWEN BRYANT ALONG
THE COASTS OF LABRADOR, NEWFOUNDLAND AND NOVA SCOTIA**

BY CHARLES W. JOHNSON

In the summer of 1908 the schooner *Lorna Doone* belonging to Dr. Wilfred T. Grenfell was chartered by a party including Mr. Owen Bryant and his brothers Dr. John Bryant and Mr. Edward S. Bryant. The vessel went as far north as the southern end of Cape Chidley Island. The most northern points at which Mr. Bryant collected were Mettek Island near Eclipse Harbor and Kowaktorvik Bay, north of Nachvak. In regard to collecting Mr. Bryant says: "I started out with the idea of collecting on land and had no intention of doing any dredging. On the way to St. John's the vessel happened to be drifting over part of the Grand Banks in about 50 fathoms of water, I collected a number of pelagic animals by using a butterfly net as a tow net. This gave me the idea of making use of any future opportunities by dredging. At St. Johns I had a blacksmith make me a dredge frame, had some netting sewed together to form a bag and bought 200 fathoms of rope, about one-half inch in diameter. The dredge often came in very hard, but we